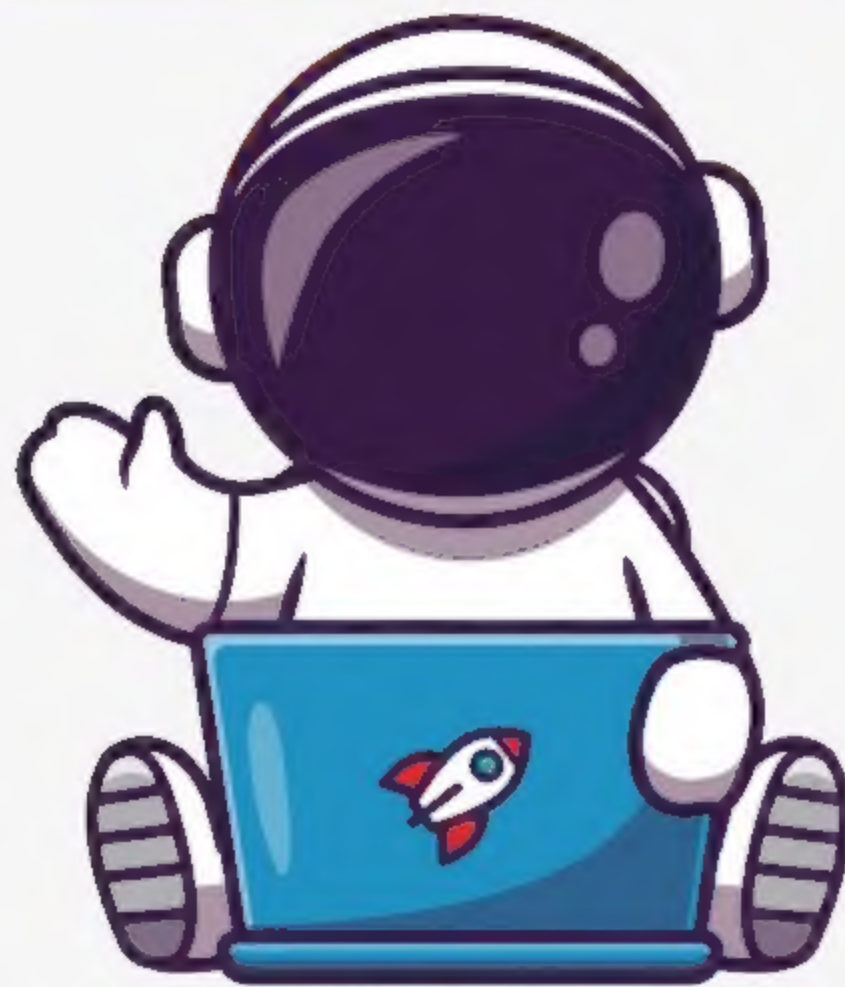


Lesson preparation book

Information & Communication Technology



**Fifth grade primary
First semester**

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general and specific objectives



Information and Communication Technology for the fifth grade of primary school: general objectives

- Use of information and communication technology to share and record information.
- Awareness of basic concepts of computer components and common problems.
- Differentiate between the different types of networks and the progress of technology over time.
- Using computer networks to communicate in different ways and how to help people with special needs.
- Knowledge of basic concepts related to ICT tools.
- Learn how to organize information on a computer.
- Planning effective research by keywords.
- Share information using spreadsheets.
- Gaining experience to protect personal information and data.
- Awareness of copyright concepts.
- Use of multiple reliable sources.
- Editing, quoting and citing from various sources on the Internet.

Special objectives

- Give examples of how information is shared.
- Define methods for recording information.
- communicate and exchanges information with his colleagues through educational platforms.
- Describe common computer problems.
- Explain how to solve some common computer problems.
- Explain what a network is.
- Describe the different types of networks.
- Explain the evolution of communications in the computer so far.
- Describe the different ways in which computer networks can be used to communicate.
- Explain basic scientific concepts related to ICT tools.
- Explain how computer networks can help us in our daily lives.
- Describe what file management is
- Describe common problems in the field of information and communication technology.
- Develop solutions to ICT problems.
- Explain how following specific steps helps to discover and fix problems.
- Describe different types of accessories for electronic devices.
- Show how to organize information.
- Explain how effective search planning helps in accessing information on the Internet.
- Discuss how the use of keywords and subtopics helps enhance the accuracy of search results.
- Explain effective strategies when searching on the Internet and recording results.
- Discuss when he might decide to publish information online.
- Explain how to share information using spreadsheets.



Lesson(1)

Explorer in action

Strategy

Problem Solving

Critical thinking

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **Give** examples of how information is shared.
- **Identify** methods for recording information.
- **Communicate** and share information with his colleagues through educational platforms.

"Preface"

What challenges do you face when making a virtual call over the Internet?

Accompanying activities

Take the students to the computer room and ask them the introductory question and discuss the answers with them and show them the video (The Search for the Lost Palace) and through it we deduce the tools that Fred Hebert uses to communicate and share information with his students.

View Lesson

Tools used by (Fred Hebert) in his daily work:

- word processor in writing reports.
- Spreadsheet program (Excel) in graphs and their expression.
- Presentation Program (PowerPoint)
- E-mail to communicate officially
- (whatsapp - zoom) programs for making virtual meetings.

Evaluation:

For official communication, Fred Hebert uses



Lesson(2)

Computer peripherals

Strategy

Problem Solving

Critical thinking

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **Explain** the basic concepts of tools attached to the computer.
- **Describe** common computer problems.
- **Explain** how to solve some common computer problems.

"Preface"

What challenges do you face when making a virtual call over the Internet?

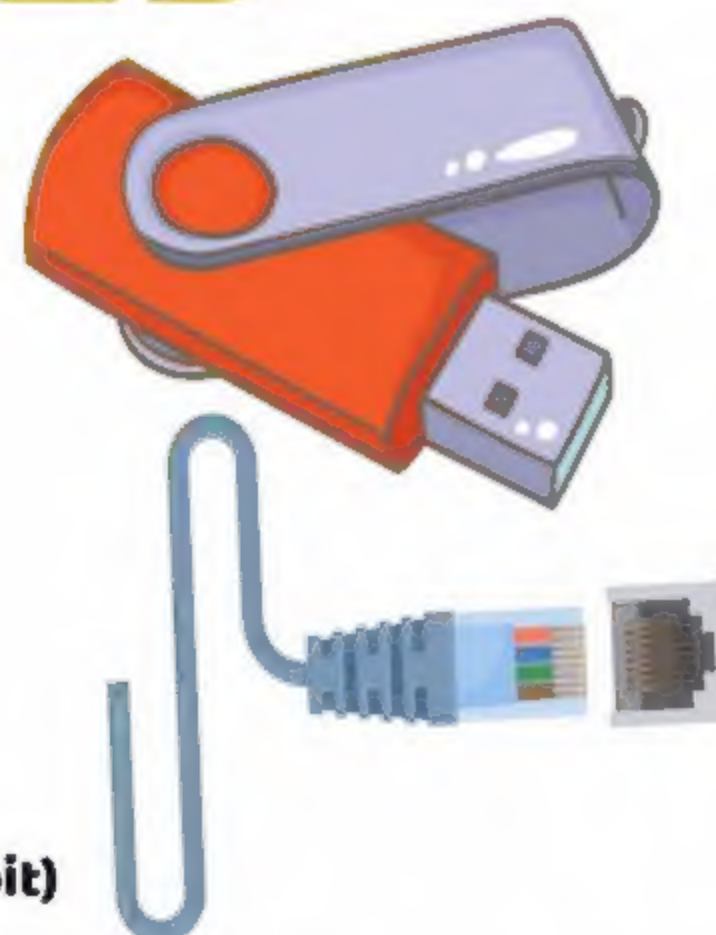
Accompanying activities

Take the students to the computer room and ask them the introductory question and discuss the answers and show them the basic peripherals of the computer with some common problems and ways to solve them through a presentation.

View Lesson

PC peripherals:

- Flash Memory Flash Memory.
- Ethernet Cable.
- Ethernet port.
- Router.
- External Hard drive.
- High Definition Multimedia Interface (HDMI).



Measuring of Storage units :

(terabyte - gigabyte - megabyte - kilobyte - byte - bit)

The measurement unit for communication speed: megabytes per second, Mbps.

Processor speed unit: GHz.

Common computer problems see the book

Evaluation: The processor speed is measured by the



Lesson (3)

Networks

strategy

Critical thinking

Cooperative Education

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **Explain** the nature of the network.
- **Describe** the different types of networks.
- **Explain** the evolution of communications in the computer so far.

"Preface"

**What does the
word network
mean to you?**

Accompanying activities

Take the students to the computer room and ask them the introductory question and discuss the answers with them. I make a presentation explaining the concept of the Internet and networks and their types, discussing these types and their common characteristics, and linking the topic to their daily lives.

View Lesson

Internet :

It is a network that connects computers and people who use that network from all over the world. To connect the computer to it, you need a gateway (router) (and an ISP provider).

World Wide Web WWW: It is an acronym (WORLD WIDE WEB), which is part of the Internet and consists of web pages that can be navigated between them.

Intranet:

A private network limited to a group of people that connects them together, such as a school network.

closed network:

It is closed as in the computer lab at the school by connecting with cables while allowing file sharing.

Evaluation: WWW is an abbreviation for



Lesson (4)

Digital communication tools

Strategy

Critical thinking

Dialogue and discussion

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **Describe** the different ways in which computer networks can be used to communicate.
- **Explain** basic scientific concepts related to ICT tools.
- **Explain** how computer networks can help us in our daily lives.

"Preface"

What is the difference
between face-to-face
communication and
virtual
communication?

Accompanying activities

Take the students to the computer room, ask them the introductory question, discuss the answers, and make a presentation explaining the concept of the Internet of Things, Bluetooth technology, and the role of networks in the lives of people with disabilities.

View Lesson

The Internet of things :

Consists of devices connected to the Internet via WiFi, which you can control remotely. Such as Bluetooth speakers and digital home appliances (refrigerator - washing machine) through a specialized application.

Bluetooth:

A network technology that connects wireless devices over a short range to form a network for transmitting data between different devices.

Advantages of using networks for people with disabilities:

- Bluetooth speakers.
- Screen readers for audio feedback.



Evaluation: Mention a home appliance that can be connected to the internet?

strategy
Problem Solving
Critical thinking



Lesson (5)

**Internet connection
problems and how to
solve them**

Date
Class
per

Lesson objectives

By the end of this lesson the student will be able to:

- **Describe** common problems in the field ICT .
- **Develop** solutions to common ICT problems.
- **Explain** how following specific steps helps to discover and fix problems.

"PREFACE"

**What problems did you
encounter while using ICT
tools and how did you solve
them?**

Accompanying activities

Take the students to the computer room and ask them the introductory question and discuss the answers with them and then ask them a specific problem (internet outage) and ask for their suggestions to solve the problem and show them through a presentation the steps to be followed to help solve computer problems with some common problems and how to solve them.

View Lesson

Troubleshooting steps:

- 1 - Determine the problem (from the computer or from the software).
- 2- Think of different ways to solve the problem.
- 3- Studying potential solutions and testing them until one of them succeeds.
- 4 - Learning while solving the problem to increase experience.
- 5- Seek the help of the teacher or a family member if you do not find a solution to the problem.

PC problems and their potential solutions

the problem	Possible solutions
My computer is slow when I open an app	Shutdown and restart the computer, check for software updates, and delete unwanted programs.
The search engine is running slow	Check wi-fi connection, check for updates of apps on your device
No internet connection	Use software to troubleshoot wi-fi connection problems Make sure the router is connected Reboot the router Try a new Ethernet cable Contact the customer service of the company that gives you your Internet service provider (ISP) For help.
slow loading	Restart your computer and router and check your internet speed

Evaluation: There are no organized steps to discover and find solutions to Internet use problems ()



Lesson (6)

digital file management

strategy

Critical thinking

creative education

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **Describe** different types of electronic device Peripherals.
- **Describes** what file management is.
- **Explain** how to organize information.

"preface"

How do you organize your school work and personal files? Plan for both and discuss it with your classmate?

Accompanying activities

Take the students to the computer room and ask them the introductory question and ask them to discuss in pairs and then present their findings to the other groups and discuss them in it, with a presentation showing new computer accessories and a practical demonstration showing how to manage files on the computer.

View Lesson

Scanner: A machine used to enter images and graphics into the computer, as it converts them from their graphic nature to a digital image in order to suit the nature of the computer and to facilitate storing them in a file and calling them when needed.

Digital camera: It is an electronic imaging camera that takes pictures and stores them electronically, some of which can record audio or video in addition to pictures.

QR Code: Think of it as a simple container that stores information. You can scan QR codes online using the camera on your smartphone. Simply point your smartphone camera at the QR code and it will be recognized automatically.

a) Create a home folder:

1 - Right-click on the place where you want to create the folder.

2 - Choose the new command. 3 - Choose the command Folder.

b) Add a subfolder inside the main folder

c) Renaming the folders to suit their content and type.

Evaluation: It is preferable to organize file addresses and store them in files according to their content ()



lesson (7)

Information search strategies

strategy

Critical thinking

Dialogue and discussion

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

Explain how effective search planning helps in accessing information on the Internet

- **Discuss** how the use of keywords and subtopics helps in enhancing the accuracy of search results.
- **Explain** effective strategies when searching on the Internet and recording results.

"preface"

What strategies do you use when searching for information on the Internet?

Accompanying activities

Take the students to the computer room and ask them the introductory question and ask them to discuss in pairs and then present their findings to the other groups and discuss them in it, with a presentation explaining the importance of planning in the research process and the suggested steps when searching online.

View Lesson

The Internet contains a huge amount of information, so during your search, you should:

- Plan your research, analyze the information you find, and verify it critically.
- Accurately define the information you seek to access.
- Choose keywords carefully, as it is not recommended to use complete sentences.
- Evaluate, select, and organize the primary information that you find during your search on the Internet.
- Collaborate with your classmates while building knowledge.
- Divide the research topic into smaller subtopics.
- Share your results and organize them for a presentation.

Evaluation:contains a huge amount of information and data in various fields.



lesson (8)

Share information

strategy

Critical thinking

Dialogue and discussion

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **Discuss** when it may decide to publish information on an intranet.
- **Discuss** when he may decide to publish information on the Internet.
- **Explain** how to share information using spreadsheets.

"preface"

When can you decide to
share information over
the internet?

Accompanying activities

Take the students to the computer room and ask them the introductory question and ask them to discuss in pairs and then present their findings to the other groups and discuss them in it, with a presentation explaining the difference between participation on the Internet and intranet, with a practical demonstration and application of using the Excel program and introducing it.

View Lesson

Share information:

The Internet is used to share information over the World Wide Web and is less secure.

The intranet is used to share information over a closed network and is more secure.

Microsoft Excel: It is a workbook with the default name (book1), and each book consists by default of (3) worksheets, and it can be added and deleted. The worksheet consists of columns (columns) and rows (rows) and the result of the intersection of columns with rows is called (cell), the cell can contain texts, numbers or equations.

Column Title: Each column has a title consisting of letters that appear at the top of the column.

Row title: Each row has a title consisting of numbers that appear to the left of the row.

Cell address: consists of the column address followed by the row number.

Active cell: It is the selected cell that has been selected. Its solution appears as a black frame, and its title appears in the formula bar above the column headings.

Excel features:

It includes many formulas and functions that help in performing arithmetic operations.

It represents data in the form of a graph in different formats.

Activity (1) Practical: Arrange the information alphabetically.

Activity (2) Practical: Steps to create a simple formula for addition in a cell.

Evaluation: A cell in Excel can contain

strategy
Performance
based Evaluation

review
The first theme

Date

Class

per

Lesson objectives

By the end of this lesson the student will be able to:

- **confirm** the information, meanings and knowledge acquired in the first theme.
- **divide** the subject into units of study that are easy to review and retrieve.
- **Solve** as required by the questions in the first theme.

"preface"

What are the main topics of the first theme?

View Lesson

First write and compare:

Write a sentence explaining the link between each of the following pairs of phrases, then compare your sentences with those of your colleague.

1 - Networks and the Internet of Things.

2 - Folder and file.

3- Opinion poll and chart.

Second, read and answer:

1 - How does Fred Hebert share information?

2 - What can happen if you open too many apps at the same time?

3 - Give an example of a computer network.

4 - Share a way you can use computer networks to communicate.

5- What is meant by following a particular procedure?

Solve the rest of the textbook questions.